

10/500653

DT15 Rec'd PCT/PTO 2 JUL 2004

VIA HAND DELIVERY  
PATENT 70404.27

#3

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re. application of :  Masanobu MIZUSAKI and Motohiro YAMAHARA  Serial No.: Unknown  Filed: Concurrently herewith  FOR: ORGANIC EL LIGHT EMITTING DEVICE AND LIQUID CRYSTAL DISPLAY USING THE SAME	International Application No.: PCT/JP03/03034  International Filing Date: March 13, 2003
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**INFORMATION DISCLOSURE STATEMENT**

U.S. Patent and Trademark Office  
2011 South Clark Place  
Customer Window, Mail Stop PATENT APPLICATION  
Crystal Plaza Two, Lobby, Room 1B03

Arlington, VA 22202

Sir:

In accordance with 37 CFR §1.56, and in recognition of their duty to disclose to the United States Patent and Trademark Office relevant information known to be material to patentability, Applicants herewith submit copies of the prior art listed on the attached Information Disclosure Statement (Form PTO-1449). The prior art references 5-7 and 15 were cited in the International Search Report for PCT application No. PCT/JP03/03034. The prior art references 1-4 and 8-14 are additional references that Applicants submit herewith.

The relevance of the prior art reference 8 is discussed in line 22 of page 11 of the originally filed specification and further outlines a concept of dendrimers, synthetic methods of dendrimers and applications of dendrimers.

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U.S. Patent Application No.: Unknown  
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The relevance of the prior art reference 9 is discussed in line 23 of page 11 of the originally filed specification and further outlines a concept of dendritic polymers and synthetic methods thereof.

The statement is not a representation that all of the information cited is necessarily effective as prior art against the application.

Applicants respectfully request that the disclosed references be made of record in the subject application.

Respectfully submitted,

Date: July 2, 2004



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Substitute for form 1449/PTO

Complete if Known

**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

(Use as many sheets as necessary)

Sheet **1** of **2**

Application Number	<b>10/500653</b>
Filing Date	
First Named Inventor	<b>Masanobu MIZUSAKI</b>
Art Unit	
Examiner Name	
Attorney Docket Number	<b>70404.27</b>

**U.S. PATENT DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Document Number Number-Kind Code 2(if known)	Publication Date MM -YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	<b>1</b>	<b>4,772,885</b>	<b>09/1988</b>	<b>Uehara et al.</b>	

**FOREIGN PATENT DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document Country Code <sup>3</sup> Number-Kind Code <sup>5</sup> (if known)	Publication Date MM -YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T <sup>6</sup>
	<b>2</b>	<b>JP 62-227121</b>	<b>10/1987</b>	<b>JAPAN</b>		<b>X</b>
	<b>3</b>	<b>JP 11-204261</b>	<b>07/1999</b>	<b>JAPAN</b>		<b>X</b>
	<b>4</b>	<b>JP 11-316376</b>	<b>11/1999</b>	<b>JAPAN</b>		<b>X</b>
	<b>5</b>	<b>EP 1 011 154 A1</b>	<b>06/2000</b>	<b>EPO</b>		<b>X</b>
	<b>6</b>	<b>EP 1 081 774 A2</b>	<b>03/2001</b>	<b>EPO</b>		<b>X</b>
	<b>7</b>	<b>WO 01/59030 A1</b>	<b>08/2001</b>	<b>WIPO</b>		<b>X</b>

Examiner Signature		Date Considered	
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\*Examiner: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered, include copy of this form with next communication to applicant.

<sup>1</sup> Applicant unique citation designation number (optional). <sup>2</sup> See Kind Codes of USPTO Patent documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. <sup>3</sup> Enter Office that issued the document by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Abstract is attached. This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14.

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**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

(Use as many sheets as necessary)

Sheet 2 2

Application Number	10/500653
Filing Date	
First Named Inventor	Masanobu MIZUSAKI
Art Unit	
Examiner Name	
Attorney Docket Number	70404.27

**NON PATENT LITERATURE DOCUMENTS**

Examiner Initials	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title Of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
	8	Masaaki KAMKIMOTO, Kagaku, Vol. 50, pp. 608-612, 1995.	
	9	Masaaki KAKIMOTO, Kobunshi, Vol. 47, pp.804-807, 1998.	
	10	M. REDECKER et al., "Mobility Enhancement Through Homogeneous Nematic Alignment Of A Liquid-Crystalline Polyfluorene", Applied Physics Letters, Vol. 74, No. 10, pp. 1400-1402, 03/1999.	x
	11	K.S. WHITEHEAD et al., "Highly Polarized Blue Electroluminescence From Homogeneously Aligned Films Of Poly (9,9-dioctylfluorene)", Applied Physics Letters, Vol. 76, No. 20, pp. 2946-2948, 05/2000.	x
	12	Craig J. Hawker et al., "Preparation Of Polymers With Controlled Molecular Architecture. A New Convergent Approach To Dendritic Macromolecules", J. Am. Chem. Soc., Vol. 112, No. 21, pp. 7638-7647, 1990.	x
	13	Woo-Dong JANG et al., "Dendritic Physical Gel: Hierarchical Self-Organization Of Peptide-Core Dendrimer To Form a Micrometer-Scale Fibrous Assembly", J. Am. Chem. Soc., Vol. 122, No. 13, pp. 3232-3233, 2000.	x
	14	Virgil PERCEC et al., "Synthesis And Structural Analysis Of Two Constitutional Isomeric Libraries of AB <sub>2</sub> -Based Monodendrons and Supramolecular Dendrimers", J. Am. Chem. Soc., Vol. 123, pp. 1302-1315, 2001.	x
	15	Xu-Tang TAO et al., "Hyperbranched Polymers For Electroluminescence Applications", Advanced Materials, Vol. 10, No. 3, pp. 226-230, 1998.	x

Examiner Signature		Date Considered	
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<sup>1</sup> Applicant unique citation designation number (optional). <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached. This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14.